

especially when the patient was exposed to the direct action of the sun. During the first years, this species of glacial torpor, or asphyxia, did not last beyond a few days; the fingers, however, did not regain at any time their natural warmth and flexibility.

No satisfactory cause could be assigned for this singular disease. Rigid inquiries were made respecting his food, but nothing satisfactory could be ascertained to account for it. His occupation had been that of a thresher of corn. His general health had been, as already stated, perfectly good.

M. Dupuytren, regarding the disease as an inflammatory affection of the arterial capillaries, akin in its nature to what takes place in the gangrena senilis, resorted to the same mode of treatment, which he has been in the habit, for many years past, of employing so successfully in the latter species. The patient was bled from the arm, poultices were applied to the parts, and a moderate diet enjoined. In the course of eight days, the heat, colour, motility, and sensibility of the hands and feet were restored, as if "par enchantement." The patient was advised to have recourse to the same treatment, if the disease should ever return.—*Med. Chirurg. Rev. from Revue Méd.*

52. *Case of Incised Wound of the Throat.* By Dr. A. GILMORE.—The wound, which was inflicted with a sword, occupied the interspace between the thyroid cartilage and os hyoides; it penetrated to the pharynx, but no important blood-vessel was divided; the incision gaped frightfully, and when the muscles of the part were thrown into convulsive action, several fingers might have been introduced into the gullet at once. Nevertheless, when the edges of the wound were in apposition, and the cut was covered with a bit of lint, the patient could utter articulate sounds.

As the man was deprived of the power of deglutition, he subsisted on fluids which were introduced into the stomach by means of the flexible tube, during the whole of the healing process. Under this plan the case terminated favourably; the wound healing by granulations, and at the date of his dismissal from hospital he had the full powers of deglutition, and could also articulate distinctly, though a small fistulous orifice still remained in the throat.—*Transactions of the Medical and Physical Society of Calcutta, Vol. VI.*

MIDWIFERY.

53. *Aqueous Discharge after Parturition.* by SAM'L. ASHWELL, M. D.—Discharges of water from the uterus are not unfrequent during gestation, and they are occasionally occurring in the unimpregnated condition of the organ. I am, however, disposed to think that the passing away of pints of watery fluid, soon after labour, by gush, in the first instance, and afterwards by draining, is a rare occurrence. Had it been otherwise, it would certainly have been noticed in some of the valuable works we possess, and it would have become a topic of discussion in medical society.

In the subjoined cases it will be seen that the labours were natural, although somewhat protracted and severe. The patients were delicate women, but free from serious illness: indeed, there was nothing in the labour, or in the condition of the system immediately preceeding it, with which the discharge could have been satisfactorily associated, as its cause. The principle dangers connected with this morbid secretion appear to be of the inflammatory kind. The weak and rapid pulse, the tenderness and enlargement of the uterus, and the almost entire suppression of the milk and lochia, plainly point to puerperal mischief, too likely, when the danger is not averted, to terminate unfavourably. It is, perhaps, singular that the mucous lining of the uterus should secrete a serious or aqueous discharge, especially when such discharge of water is not dependent on the membranes inclosing the fœtus; but we know that the mucous

lining of the nostril occasionally pours forth large quantities of aqueous fluid; and there seems no reason why, under a like derangement of function, the lining membrane of the uterus may not do the same.

That this affection decidedly interferes with the consecutive series of events following parturition, is evident, from the suppression of the lochia and milk, as well as from the scanty secretion of urine: it may, therefore, be placed in the class pyrexia.

I cannot state with certainty what might have been the effect of a vigorous antiphlogistic treatment; because, in the cases related, a modified plan was pursued. As, however, the affection may be regarded as catarrh of the uterus, attended by inflammation, cases will probably occur in which depletion to a greater extent will be required. There can be no doubt that the lining membrane of the uterus furnishes the discharge. Under natural and healthy puerperal circumstances, the same membrane, then possessing considerable extent of surface, pours forth the lochia. This secretion, we know, is at first sanguineous, subsequently it becomes paler, but is still mucous; nor is it till many days have elapsed that it assumes a leucorrhœal or serous character. The derangement of function, which is productive of this "aqueous discharge," instead of the lochia, is the disease now described.

CASE I. Mrs. G— was confined on Saturday, November 6th, 1830, of her fifth child. The labour was severe, but perfectly natural.

Sunday, November 7th.—Complains of a good deal of pain in the hypogastric region; the uterus is large and tender; pulse 120, but neither full nor strong. Urine scantily secreted; scarcely any lochial discharge; and the afterpains not at all severe. Ordered castor oil, bran fomentations to the belly, and six grains of Dover's powder, in common saline mixture, every six hours.

Monday, 8th, 5 P. M.—I was hastily sent for. On my arrival I found the nurse, as well as the patient, much alarmed; there having occurred suddenly a very copious gush of transparent, colourless, inodorous discharge from the uterus: at least three pints had escaped. The bed was wetted entirely through, and a pool had formed about the lower part of the person. The fluid had scarcely any taste, and closely resembled water. She was exhausted; pulse quick, 130; and she was altogether hurried and alarmed. There was neither tension nor fullness of the mammæ, indicating the secretion of milk; the uterus was not so large as on the previous day, but very tender to the touch. There has been no lochial secretion, and only a scanty discharge of high-coloured urine. She was made comfortable by the removal of the wetted linen. A draught composed of *thirty* minims of aromatic æther and the aromatic spirit of ammonia was immediately given, and she was allowed some bland nourishment. The other remedies were ordered to be continued as before.

Tuesday afternoon, the 9th.—I have seen her several times since last evening. The "aqueous discharge" still continues, *twenty* napkins having been used: it is not all streaked with blood, nor is there any appearance of lochial or mucous discharge. After sleep, the water comes away in slight gushes, but by draining at other times. The urine is still scanty and high-coloured; pulse 120, small and compressible; the breasts are quite flaccid—the child, therefore, is fed. Abdominal tenderness less; uterus better contracted, still reaching half way between the umbilicus and pubes. Continue the remedies.

Wednesday.—Bowels have been naturally relieved. Urine still sparing in quantity and high in colour; pain of the abdomen less, and uterus not so tender to the touch. Pulse 100; debility excessive; little or no secretion of milk; "aqueous discharge" still very abundant; no lochia.

After this period, no distressing symptoms occurred, if the languor and extreme debility be excepted. The discharge of water continued for twelve days; for the last six it was evidently on the decline. The milk was never naturally nor healthily secreted; the child, in consequence, being brought up by hand.

CASE II. Mrs. T—, æt. 28, a woman of spare and delicate habit, and the mother of five children, was confined December 8th, 1832, of a fine healthy boy,

after a natural and quick labour. I visited her some hours after, and I found her suffering severely from afterpains. Pulse 120, sharp, yet compressible. Bladder rather distended, and uterus large. Ordered half a grain of opium, and three grains of calomel; directing a table-spoonful of castor oil early on the following morning.

December 9th.—I was requested to see her in the afternoon, in consequence of a discharge of water, which had exhausted and alarmed her. I found that she had lost between two and three pints of limpid inodorous fluid, and it was still draining away. The uterus had descended behind the pubes; it was not large, but very tender. Pulse 130, small and feeble. There had been no lochial discharge, and she had passed once a large quantity of urine. Ordered bran fomentations, Dover's powder, grs. vj. every six hours; and enjoined perfect quietude.

This patient went on just as in case 1., only that there was some secretion of milk, and the child was partly nursed. She was much debilitated, and the discharge did not cease for ten days.

CASE III. Mrs. Penkin, æt. 40, the wife of a labourer, has had several children; her labours good, with the exception of a temporary state of melancholia. She is of sallow complexion, and has ailed greatly during the present gestation. For the last three days she has been suffering; and owing to the increase of her pains, the presence of Mr. Cotton was requested. Her labour was natural, although severe; and there having been copious losses of blood in her preceding deliveries, Mr. Cotton bandaged the abdomen, and exhibited ℥ss. of the ergot, previously to the expulsion of the placenta. Things went on comfortably until the fourth day, when Mr. Cotton was sent for. He found his patient had passed a bad night, and complained of severe pain in the hypogastric region, which was accompanied with the greatest pain on pressure; her pulse was small, 115; urine scanty and high-coloured; and there had been a discharge of transparent watery fluid, sufficient to soak from twelve to twenty napkins. Bowels confined. Leeches and fomentations were ordered to the abdomen; calomel and opium to be given, with an ounce of castor oil, the following morning, if the bowels remained unacted upon.

5th day.—Very low, and in great distress of mind, saying she should never recover. Her abdomen was tympanitic, and tender to the touch; countenance pale, and bowels still unmoved; her pulse 120, small and weak; the discharge the same in quantity. At the suggestion of a relative, for whom Mr. Cotton attended, he introduced the catheter, and drew off eight ounces of high-coloured urine; but this effected no mitigation of the symptoms. Cataplasms were ordered to the abdomen, and an enema with Ol. Terebinthinæ, ℥jss. exhibited.

This had the effect of opening the bowels, which greatly relieved the tender and painful condition of the abdomen. The pulse also became fuller, 108. Pulv. Ipecac. Comp. gr. x. were ordered at bed time.

On the sixth day she was much improved; her pulse soft, 100; the discharge was also lessened, soaking but ten napkins in the twenty-four hours. Light farinaceous nutriment was allowed, and saline medicine exhibited. On the eighth day, gradually getting better; eats with appetite, and the discharge has diminished, although she still uses from five to ten napkins a day; it continues limpid, and devoid of odour. Owing to Mr. Cotton leaving the country, he resigned the charge of the case; but he learned that the discharge became by degrees lessened, till at length what was left was little in quantity, and very thick in substance.

It is worthy of observation in this case, that the lochia were suppressed after the second day; and there was never any secretion of milk.

CASE IV. Mrs. T., aged thirty-two, of a spare habit, and delicate state of health, was delivered in the forenoon of August 2d, of her first child, a fine healthy living girl, after a severe but natural labour of thirty hours' duration. The placenta was expelled by the uterine action in about half an hour. The first two days the lochial discharge was very profuse, and rather offensive, with

considerable disturbance of the system; the pulse from 100 to 120; the countenance pallid, and the lips almost exsanguineous. There was profuse perspirations; the abdomen was soft; and there was no pain produced by pressure; the secretion of urine was scanty, but passed without difficulty.

On the evening of the fourth day she complained of considerable enlargement of the abdomen, but without pain or tenderness; and on the following morning the nurse was hastily called to the bed-side, the patient supposing sudden hæmorrhage had taken place; but on examination, it was found a large flow of colourless fluid had been discharged, to the amount of about a quart. This continued for eight days, in a quantity sufficient to saturate a dozen napkins in the twenty-four hours. The discharge does not dribble away, but escapes in a sudden flow, preceded by a sensation of itching, and a slight bearing down.

9th day.—The discharge is evidently abating, as not more than three napkins have been wetted with it.

Mr. Burn remarks in his letter to me, dated fourteen days after the labour, "that his patient is still greatly debilitated, and has never experienced any secretion of milk. The lochial discharge still continues in small quantity."—*Lond. Med. Gaz. September 6th, 1834.*

54. *On the Absorbent Power of the Uterus.* By Professor NÆGELE, of Heidelberg.—The celebrated accoucheur, author of this memoir, published in the *Annales de Heidelberg*, for the year 1828, a paper upon the retention of a part or of the whole of the placenta within the uterus. The remarks which follow are the conclusion and the confirmation of the opinions which were promulgated in the first memoir.

Madame K. thirty years of age, of a scrofulous diathesis, was delivered of her first child, a healthy boy, on the 5th of September, 1830, at 2 o'clock, P. M.; but the placenta was not expelled, and the midwife merely placed the umbilical cord upon the thigh of the patient. The uterus had contracted, the discharge of blood was slight, and there were no indications which would induce the practitioner to separate the placenta. The patient did not experience any uneasiness. The following day it was decided in consultation that an attempt should be made to extract the placenta, but it was found, on introduction of the hand, so intimately united with the uterus, that it would have been imprudent to have endeavoured to detach it. The treatment was confined to injections of infusion of sage and chamomile. On the 7th of September new attempts to detach the placenta were not followed with success. The same day the abdomen became painful in the left iliac region; the pulse from 90 to 100 pulsations, the tongue white, thirst excessive, urine loaded, and the stools suppressed since the accouchment. Lochia slight, of a fetid odour.

The 8th of September, the patient was exhausted, scarcely answering questions addressed to her. The skin bathed in a fetid sweat, tongue covered with a thick and tenacious coating; pulse very weak, from 115 to 120 pulsations; the thighs, hips, and the forearms covered with a vesicular eruption, which caused acute pains; the lochia, of an excessively fetid odour, were very trifling; the stools, on the contrary, were liquid and very numerous. A last effort was made to detach the placenta. It was unsuccessful as the others had been.

The state of the patient was, as may be supposed, very critical. It remained the same during fifteen days; but at the end of this time the alarming symptoms disappeared by degrees, and at the end of three months the recovery was complete. The parts had returned to their natural condition; the uterus was of its usual size; the neck presented no traces of swelling; and besides, notwithstanding the most minute examination, not the smallest fragment of placenta could be detected as having escaped.

The director of the veterinary school at Utrecht, M. Numauer, has also published many observations upon the fœtus of animals retained and dried up in the interior of the uterus. The essential condition for this desiccation to take place is the disappearance of the liquor amnii; then the fluids contained in the body

of the fœtus are absorbed by the uterine parietes as soon as they transude through the skin. This is a phenomenon precisely analogous to that of the dead bodies which are dried and become mummies in certain caves; the parietes of the uterus play the part of the dry air in the caves in which the carcasses are preserved.

These facts have a most important practical application, viz. that in abortions at three, four, or even five months, it is not necessary to attempt the extraction of the placenta when retained in the uterus, by means of instruments, although this practice has been advised by the celebrated B. Oslander. It will also be useless to search minutely for the small fragments of placenta which could remain in the uterus after the delivery; the manipulations which such attempts necessitate, being more dangerous than the presence of these fragments, which would disappear either by floating out with the lochia, or by means of absorption.—*Rev. Méd. May 1834, from Annales Clinique de Heidelberg, Vol. IX. No. 2.*

55. *On the loss of Blood during Labour, in consequence of the Rupture of a Varix.*—Varicose tumour is of so serious complication in labour that the following cases will be read with interest.

CASE I. A woman of strong constitution, forty-one years of age, pregnant with her fifth child, was seized with labour pains on the evening of the 17th of August. When the membranes had burst, and the liquor amnii was discharged, the pains gradually abated. Soon afterwards, however, upon the patient being put to bed, a severe and lengthened pain came on, and the midwife now found that the left labium had become immensely swollen and discoloured. Dr. ELSASSER was immediately summoned; but, before his arrival the tumour had burst, and a quantity of black blood been discharged. The woman became immediately exhausted, then convulsed, and she died within half an hour after the accident. The child was extracted after the death of the mother, but it also was already lifeless.

Dissection.—On the inner surface of the left labium was found a rent, an inch and a half in length, through which the fingers might be passed into a vast cavity, containing a considerable quantity of clotted blood. On the right labium, and on the inner side of both thighs, were several varicose swellings, which no doubt would have burst at some future period, had the patient lived, and been exposed to strong efforts of any kind.

CASE II. *Rupture of the Varix—Death.*—The labour had continued for upwards of twenty hours, when the “sage femme” found to her consternation that the right labium was much distended and discoloured, and that blood was dripping from its inner surface. Notwithstanding her alarm, she did nothing more than merely apply a wet rag to the abdomen. In a quarter of an hour this poor patient was a corpse. Dr. RIECKE, who arrived two hours after the patient’s death, examined the parts, found a rent, two inches long, on the inner surface of the right labium; it led into a sac, of nearly four inches in circumference, and which extended under the os pubis, and on the outer side of the ascending ramus of the arch: at the bottom of this sac was seen the ruptured orifice of the varix. This patient was about forty years of age. The pelvis was somewhat contracted in its dimensions.

CASE III. *Rupture of the Varix—Death.*—Dr. ELBERT was summoned to the assistance of a woman in labour, but she had just expired on his reaching the house. She was about thirty-four years of age, and the mother of seven children. The labour had begun favourably, and the pains had been at first regular and steady. On a sudden the woman felt that a quantity of fluid was running away from her, but she thought that it was the “waters;” the nurse, however, found that it consisted chiefly of blood: in half an hour the patient expired. The corpse presented an exsanguine appearance, the face and extremities being blanched like white wax. On the right labium, which was considerably swollen and of a livid colour, were seen three ragged wounds; through each of these, the

finger could be passed into a large cavity, which still contained a quantity of black coagulated blood. On the left labium, and also on both thighs, there were numerous varicose distentions.

In the three preceding cases, the action took place before the expulsion of the child, and in all, the child was dead when extracted. In the following case the delivery had fortunately taken place before the rupture of the varicose swelling.

CASE IV. Rupture of the Varix—Recovery.—Immediately after the expulsion of the fœtus, the external parts became enormously swollen, and at length the integuments gave way at one point, and an alarming hæmorrhage took place. Prof. RIECKE, who was called to this case, immediately applied rags dipped in cold water, which arrested the flow of blood; and the exhausted strength of the patient was then supported and revived by sinapisms to both legs, and by a cordial medicine exhibited frequently.

CASE V. Varicose Tumour high up in the Vagina—Rupture—Death.—A woman, forty-six years of age, mother of eight children, suddenly expired in labour. Dr. CARUS found on his arrival that the head of the child was detained in the outlet of the pelvis; he delivered it with the forceps, but not without experiencing considerable difficulty; for the dimensions of the pelvis were rather confined. On introducing the hand afterwards to extract the placenta, he found near the cervix of the uterus a ruptured varicose tumour; the rent was about an inch long, and the extent of the cavity about two inches all round. The head of the fœtus, when extracted, was found covered with clotted blood.

Reflections.—The preceding cases point out the characters of this species of puerperal hæmorrhage, which depends upon a varicose state of the veins of the vagina and neighbouring parts.—The distention of these organs during parturition and the consequent impediment to the free return of the venous blood, sufficiently account for the almost invariable occurrence of the accident either during its progress or immediately after it is over. Perhaps in most cases there is a simultaneous abridgment of the dimensions of the pelvis; or, at least, some existent cause of obstruction to an easy labour, either on the part of the mother, or of the child. We observe from one or two of the cases now recorded that the hæmorrhage may be speedily fatal; and indeed we cannot wonder at this when we consider that there is a free communication between the veins of the womb on the one hand, and of the thigh on the other, with those of the vagina.—*Arch. Gen. Aug. 1834, from Med. Correspondenz-Blatt, Jan. 1, 1834.*

56. Twisting of the Umbilical Cord around the Body and Limbs of the Fœtus.—Dr. SIEBOLD has published an interesting memoir on this subject. According to this author, the funis is most frequently twisted around the neck, next around the upper limbs, next the lower, then the perineum, afterwards the chest, and lastly the abdomen. In 344 deliveries, at the Maternité of Marburg, the funis was found twisted around the fœtus in 63 cases, viz:—51 around the neck, making one turn in 49, two turns in 7, and three turns in one case, in which the cord was forty-two inches. In the three infants the cord surrounded, at the same time, the neck and abdomen, in another the neck and thigh, and in the third the neck, the chest, and the thigh. Once the cord was twisted around the thigh alone, and once around the abdomen. In all these cases the cord was generally twenty inches long; and examples have occurred in which it was from thirty to forty inches long, without being twisted around the fœtus.

It has been proved that the cord often surrounds the embryo in the early months of gestation; for at the fourth and fifth months its length is much greater than that of the fœtus. The motions of the mother, and those of the fœtus, when the liquor amnii is very abundant, may favour the twisting of the cord, and this twisting may occasion fatal results. The aborted fœtus frequently presents this twisting of cord around it, and we often see atrophied parts and curved bones resulting from the compression; but delivery can always be ef-

fects, although the constriction of the cord around the neck sometimes destroys the life of the infant; it sometimes also saves their life, by preventing the prolapse of the cord, which is a more dangerous occurrence than its being twisted. When the cord surrounds the neck, Dr. Siebold advises that the ring should be enlarged by gently drawing on the placental portion, so that the whole body of the child passes through this ring. If this cannot be accomplished, it must, he says, be divided, and tied immediately after birth. In hip presentations, when the infant is astride the cord, this must be placed at the side of the fœtus, by drawing upon its placental portion.

This dissertation is accompanied with a plate representing two fœtuses. In one the cord from the umbilicus passes around the left elbow, over the chest; surrounds the neck, passes behind the right shoulder, over the abdomen, and is twice spirally twisted around the right thigh. In the other the funis proceeds from the umbilicus to the neck, around which it is once twisted, passes under the right arm pit, is then again twisted around the neck, and terminates at the placenta.

57. *Case of Abortion, with Retention of the Placenta; a second Pregnancy, with Abortion again, and the Discharge of the Ovum and Placenta of the preceding Fœtus.*—This very remarkable, and, we believe, unique case, has been communicated to the *Gazette Médicale de Paris*, (October 11th, 1834,) by Dr. PIRONDI, of Marseilles. The subject of the case was a lady thirty-eight years of age, who had been married at eighteen, and during the space of twenty years had been fourteen times pregnant; but only two of the children, the first and second, came to maturity. On three occasions the placenta remained for a longer or shorter time in the uterus after the expulsion of the fœtus. The abortions could not be ascribed to any particular cause. When in her eleventh pregnancy, Mad. ——— was attacked with rheumatism; a few days afterwards, and about the fourth month of utero-gestation, she aborted, and the placenta remained behind until the third day, when it was, after many attempts, extracted. In 1832, in her twelfth pregnancy, she again aborted at the same period, of utero-gestation, the placenta *adhering* to the uterus, and several efforts to remove it being ineffectual. An abundant and puriform discharge took place, and sixteen days after the abortion the placenta was expelled, whilst the patient was making efforts to urinate. At the end of December, 1833, Mad. ——— aborted for the sixteenth time, and the placenta was again retained. The medical attendants being aware of what had previously occurred, made no attempts to extract the placenta. The lochia were copious, very thick, and very fœtid. A short time afterwards the menses reappeared, but mixed with a small white, almost puriform discharge, and which continued during the intervals of menstruation. The patient experienced constant pain in the epigastric and lumbar regions. Four months after this last abortion, the menses ceased, and Mad. ——— experienced symptoms of being again pregnant. Towards the third month of this pregnancy, the patient was attacked with a profuse uterine hæmorrhage, for which she was bled. The abdomen, at this time, appeared to M. Pironi much larger than usual at the third month of pregnancy, and he supposed the patient must have made a mistake, and was in her fifth month. The uterine efforts increased in activity, and on visiting the patient M. P. found between the thighs of his patient a placenta, with its cord, and the fœtus half out of the vulva. A strong pain, an instant afterwards, delivered the patient. A quantity of extremely fœtid gas was then discharged. On examination the fœtus proved to be a three months one; the placenta was entire, the cord small and twisted, inserted nearer to the circumference than to the centre of the placenta, and exhibiting incipient disorganization at its base, and extending to the extent of an inch around its insertion in the placenta. Shortly after the delivery of the fœtus, the uterine pains were renewed; and M. P. thinking that they were incited by a clot of blood, intro-

duced his hand to extract it. He was much surprised at meeting, near the neck of the uterus, which was much dilated, a large round and firm body, which was with difficulty extracted. Observing, on its delivery, that it was a placenta, M. P. feared that it appertained to another fœtus, and he instantly introduced his hand into the uterus, but found its cavity unoccupied; it then occurred to him that this last might be the placenta which had remained in the uterus at the previous abortion. This placenta was five and one-fourth inches in diameter, almost two inches thick at its centre, and the insertion of the cord could not be distinguished; black and rugged on its surface; its consistence was moderate nearly throughout; however, a fifth of its circumference was deficient, and the borders of the excavated portion was softened and in a very advanced state of putrefaction.

58. *A Cancerous Ulcer at the Neck of the Uterus, cured by Cooling Injections.* By Dr. F. ALLIOT, of Montagny.—Madame de St. M.—, a brunette, of nervous temperament, aged 28 years, living at Livry, (near Paris,) had been affected for four years with a disease of the neck of the uterus, for which she had consulted in vain the best surgeons of Paris. By the aid of the speculum, an ulcer was perceived on the neck of the uterus, its bad aspect, as also the fœtid and sanguinolent discharges, the lacerating pains of which it was the seat, left no doubt of its cancerous nature. Besides, every treatment had failed, and notwithstanding the employment of all kinds of injections, depletion, moxas, fumigations, baths, &c., the disease had always retained its ascendancy, and had reduced the patient almost to a desperate condition. When she applied to me at the commencement of the year 1831, her emaciation was extreme, and she was so weak that she could scarcely hear or understand anything; at times she was incapable of connecting two ideas, her digestion was lost, her chest was affected, the uterine discharges were constant, sanguinolent, and fœtid; the pains were intense and frequent at that time, the only remedy that was employed was bleeding every two months. I first prescribed bleeding, which exhausted the little strength which remained. I then placed her on the most vigorous diet, and as the principal therapeutic means, I confined myself to the application of cold to the ulcer itself. But the patient, suffering from her chest, I feared that the impression of cold might be propagated to the lungs, and thus prove promptly fatal. I therefore contrived a sure barrier to its transmission. The patient was emersed up to the top of the chest in a warm bath, a flexible tube of a sufficient length was introduced into the vagina, until one extremity was in contact with the neck of the uterus, while the other was free above the surface of the water. An intelligent assistant directed into this tube a stream of water, at first tepid, then cool, at length cold, this kind of *douche* was prolonged from a quarter to half an hour. In this manner the application of cold produced the good effect I had anticipated, without its unfavourable reaction on the chest. At the end of one month I made an issue, successively in each arm, at the end of some months the ulcer had entirely healed, and the general health of the patient was much improved. In time, she was completely reëstablished, and for three years the cure has continued. I recommended the patient in order to prevent any chance of relapse, to restrain herself to a moderate regimen for six years.

This method of treatment would snatch many patients from the grave, for when the operation had become of no avail, and might almost preclude the necessity of this cruel remedy. This is more important than it may appear. For example, I have never seen those little tumours which are developed in the breast return, when cured by patience and suitable therapeutic agents; but when removed by the knife, I have almost invariably seen them re-produced. The bloody operation then provokes relapse; it appears indeed to render it inevitable.—*Med. Gaz.* May 30th, 1835.—

MEDICAL JURISPRUDENCE.

59. *On the Death of New-born Infants depending on anormal States of the Umbilical Cord.* By Dr. KOHLSCHWETTER.—The funis may cause the death of the child, 1st, by its prolapsus; 2dly, by becoming knotted; 3dly, by being twisted round the child; 4thly, by its shortness; 5thly, by the situation in which it is placed in a footling delivery. Authors do not agree in the cause of death in these cases; some attribute it to anemia, others to apoplexy, others to asphyxia, or rather the loss of the pulmonary function; and a fourth class, to the deficiency of nutritive juices which the funis can no longer transmit to the fœtus. Among these opinions we shall notice those alone which have enjoyed some degree of reputation.

1st. *Anemia.*—Minelhauser advised, (in 1754,) that the funis should be cut and tied to prevent the child dying of anemia, in cases of prolapsus of the funis, or during a footling labour. This opinion was adopted by Stolper in 1807; and, according to this author, the tunics of the umbilical arteries are thicker and have more elasticity than the vein, and the blood circulates with more force in the former vessels. Hence the arteries will be less exposed to compression than the vein, and the blood not being returned, anemia will arise from hæmorrhage. He thinks that the truth of this theory is demonstrated by the paleness of the child, and by internal signs of hæmorrhage; but his opinion has not been corroborated by dissections. This theory is obviously improbable to the last degree, for it is not only opposed to the structure of the funis, which does not allow the vein to be compressed without the arteries, but moreover, in children who have sunk under pressure of the brain, there has never been a deficiency of blood, which is the only sign capable of demonstrating that hæmorrhage was the cause of death.

Plethora.—The authors who suppose that death takes place from this cause, by no means agree as to the kind of plethora which arises, for, according to some, it is general, and, according to others, partial. The reasons they urge in favour of their opinions are diametrically opposed to the writers before mentioned; for those with whom we have to do at present suppose that it is not the vein but the arteries that are compressed. It should not be forgotten, however, that there is no mechanical obstruction to the circulation, even if the umbilical vessels are obstructed. And, in fact, the pulsations of the heart often continue for more than ten minutes in children born in a state of asphyxia, from compression of the cord.

Medico-legal Questions.—The different conditions of the funis may lay the foundation for so many difficult questions in medical jurisprudence. First of all, we must not forget to declare that respiration, while the child is in the vagina, is a possible occurrence. Artificial insufflation of the lungs may give rise to great difficulties; for if it is true that a congestion of blood may take place in the lungs of the fœtus which has not breathed, in consequence of the suppression of the umbilical circulation, we lose the diagnostic sign by which it has been attempted to ascertain whether the respiration has been natural or artificial. This is one of the weightiest objections brought forward by Jaeger against Plouquet's test.

Knebel and Hernt have supposed that prolapsus of the funis may be known to have taken place by the contusion and ecchymosis of the parts of the cord which have been compressed; and in a case of prolapsus Michaelis observed two red and ecchymosed spots on the cord. But this sign is not always present, for the pressure on the cord is often not great enough to cause ecchymosis. The attention of the physician ought to be particularly directed to the head, where he will find the traces of a bloody tumour, even if it has already disappeared; for if the child dies during the beginning of labour, the swelling is then to be seen in the middle of the sagittal suture, whereas in new-born infants it is in the upper and posterior quarter of either parietal bone. More-

over, it must be remembered that children may be born alive, in spite of the prolapsus of the funis, but in such a state as to die after having breathed feebly.

When a knot upon the cord has been produced a long time before delivery, it leaves furrows in the spot where it has existed, as a trace of the meeting of the parts which had formed it. The very moment that the knot is untied, the cord swells a little, and shows such a tendency to remain knotted, that, if it is relaxed and pulled out, it immediately returns to its former state. But it is not so with a knot of recent formation; when once undone it leaves no trace behind.

The twisting of the cord around the neck of the child is a source of much doubt to the medical jurist; for neither experiments on the lungs, nor the ecchymosis around the neck of the child, nor the external and internal signs of asphyxia, will empower him to decide whether the death has been produced by accident or design. A very remarkable case is mentioned by Jaeger. A woman was secretly delivered of a child, who came into the world in a state of half-asphyxia, the cord being twice twisted round its neck; and the mother was accused of having strangled it. There was a deeper and narrower mark around the neck of the child than the cord would have made; there was no ecchymosis, and the lungs were but little expanded by air. The cranial and thoracic cavities contained a great deal of blood. The question was ably resolved by the College of Physicians at Wurtemberg, and their decision was confirmed by the confession of the prisoner. In Servaès' case, the mother strangled the child with the funis itself. The fact narrated by Schwartz is still more replete with difficulties. In a face presentation, the child came into the world dead, and with its neck tightly squeezed between two circumvolutions of the funis. A livid zone surrounded the neck, causing a depression sensible both to the sight and touch. The face was rather swelled, but not livid, and all the rest of the body was covered with livid spots. The coronary vessels of the heart and stomach were gorged with blood, as well as the right auricle; the left auricle was empty and flabby. The lungs seemed gorged with blood, and sank in water. The veins of the abdomen were swelled; there was no congestion in the brain. If to this we add, that the child, presenting by the face and in the most favourable position for respiration in the vagina, might have breathed, we shall have all the signs of suffocation by strangulation. It is therefore with justice that Plouquet, Knebel, Henke, and others, have considered the solution of the problem in similar cases as exceedingly difficult. According to Adolphus, Plouquet, Henke, Hinze, Platner, and Bernt, the twisted cord may leave a livid zone around the child's neck. Klein and Elsasser are of the contrary opinion, and do not allow the possibility of a zone produced by the funis during labour. Albert observed a livid mark situated in the axilla, seven lines long and two lines broad, but a portion of the funis was compressed. An important distinction, however, is to be made. If there is a band of ecchymosis around the neck, it ought not to form a perfect circle, but the two ends should cross one another. If the circle is perfect, we must suspect that the impress is due to a murderous hand, and this suspicion will be strengthened, if the lungs are found distended with air, and containing blood, together with all the other signs of life having gone on after delivery. As to supposed death from the shortness of the umbilical cord, the physician cannot give an opinion on this point, if the cord is not submitted to his examination. In the cases the most favourable for forming an opinion, his decision must still be doubtful; for all that he knows concerning the relation of the funis to the axis of the pelvis, concerning the dimensions of the fœtus, the state of the funis itself, the probable insertion of the placenta in the uterus, and all that respects delivery, will not allow him to decide if the child has died from tension of the funis during labour, or from some other cause.

Delivery by the Feet.—Although delivery by the feet is frequently fatal to the child, medical jurists have taken but little pains to ascertain the effects of this kind of death. It is true that respiration in the vagina can very rarely take

place in such cases, yet its possibility cannot be altogether denied. In the case reported by Pyl, all the signs of this variety of delivery may be recognised, and the question appears to have been well answered. In the case quoted by Batner, the midwife had extracted the fœtus. In the report, the compression of the cord, and the probable tension of the spinal marrow, have been passed over. When no trace of violence can be discovered, we may conclude that the death of a new-born child arises from a footling delivery, if, in addition to the signs of death caused by compression of the funis, a swelling is observed in the genitals and scrotum of the male, or in the labia of a female. Additional information may also be acquired from the circumstances attending the delivery, and from an examination of the genital parts of the mother.—*Med. Quart. Rev. July, 1834, and Archives Générales.*

60. *Hydrate of the Tritoxide of Iron as an Antidote to Arsenic Acid.*—In our last No. p. 537, we noticed the announcement of an antidote to arsenic, by Drs. Bunsen and Berthold, as also the researches made up to that time relative to the powers of the article. Since that period some additional facts have been collected, which seem to confirm the alleged powers of the antidote. The following fact was communicated to the Society of Practical Medicine of Paris, by Dr. Leger:—A child, eighteen months of age, having drunk a solution of the gray oxide of cobalt, (commonly called “fly-poison,”) was immediately seized with violent colic. Her mother, alarmed by the sufferings of the infant, called in an apothecary, who administered on the instant the hydrate of the tritoxide of iron, a pinch, in some sugar and water, every quarter of an hour. When the medicine was administered the first time, the little patient was lying stiff on the lap of her grandmother, complaining of violent pain in the belly. She had vomited twice. After the administration of the first dose she was less agitated; the remedy was repeated; and after the fifth dose the patient was much relieved; she fell asleep, and did not awake until the next morning. The pain had now completely disappeared, the infant was gay, and since the period spoken of has enjoyed perfect health.

Fact 2.—Dr. Bunsun, of Göttingen, has already made some experiments on dogs, which seem to prove that arsenious acid may be neutralized by the tritoxide; and he asserts that he has found in the excrement of animals submitted to the poison and its antidote, an insoluble arseniate of iron.

M. ORFILA communicated to the Royal Academy of Medicine, on the 4th of November, some experiments made on this subject by M. Lesueur, of the Faculty of Medicine. The experiments were performed on dogs, and in order to prevent the rejection of the poison by vomiting, the œsophagus was tied immediately after the administration of the arsenic and iron.

Experiment 1.—Nine grains of arsenic acid were given to a good-sized strong dog, and immediately after, three ounces two scruples of the hydro-tritoxide of iron. The œsophagus was then tied. The animal experienced no symptoms whatever of poisoning, and was alive when M. Orfila made the communication, seventy hours after the administration of the poison. It is right to remark that nine grains of white arsenic, or arsenic acid, generally destroys a dog in about five or six hours. The above-mentioned experiment was repeated on several dogs, and always gave similar results.

Experiment 2.—Nine grains of arsenic acid were given to another dog; and, in half an hour after, three ounces two scruples of the antidote. This animal soon died, with all the symptoms of poisoning.

M. Orfila observed, that the first experiment proved beyond doubt the efficacy of the tritoxide as an antidote to arsenic acid. The action of this poison has hitherto been combated with little success, because, as it is insoluble in water, its particles become concealed, and, as it were, incrustated, in the mucous cysts of the stomach; hence, but little advantage is obtained from the use of hydro-sulphuric acid, although it decomposes perfectly the arsenic acid. People who

poison themselves with arsenic generally take it in a solid state, and it is curious to observe how, in the present case, one solid decomposes another.

The second experiment in which the animal died by no means contradicts the first, for it is now well determined that arsenic poisons, not by the inflammation of the stomach which it causes, but by its action on the brain and heart after absorption; and the latter takes place so rapidly, that after half an hour the administration of the antidote is too late.

On the 9th of December, M. Orfila communicated to the Academy the experiments which he had made, in conjunction with M. Miguel and Nonat, on the same subject, and which furnished the following results:—

Twenty-four grains of arsenic were given to a dog: twenty minutes afterwards four scruples of the tritoxide of iron were administered in water; the animal, which had vomited before the administration of the counter poison, remained dull, but in two days was quite well.

On the same day, a small dog was given ten grains of arsenic, and, immediately after, the tritoxide; in the afternoon the animal was perfectly healthy.

The same experiment was repeated, with exactly similar results, on three other dogs. In all these cases, the antidote was given in a dose twelve times greater than the poison.

The œsophagus of a spaniel was now tied without any poison having been given; the dog died in seventy-eight hours.

Twelve grains of arsenic were given to another spaniel; the œsophagus was tied, and he died in two hours.

Nine grains were administered to a dog: the œsophagus was tied; death occurred in two and a half hours.

Twelve grains of arsenic were given to a small dog: the tritoxide immediately after, and the œsophagus was then tied. In two or three hours the external symptoms of poisoning had disappeared: in twenty-four hours the ligature was removed from the œsophagus, and the animal died on the sixth day.

The same experiment was repeated on two bitches; one died in seventy-two hours, the other in eighty-three. In order to ascertain in what period after the administration of the poison the antidote might be given with some hope of success, the following experiments were made.

Twelve grains of arsenic were given to a middle-sized dog; the iron two hours and a half after; the animal died in a quarter of an hour.

Eighteen grains were given to a large dog; the animal made several efforts at vomiting; at the expiration of an hour the ligature of the œsophagus was loosened, and the antidote administered: the dog lived ninety hours.

Eight grains of arsenic acid were given to a dog: the iron in an hour after; death in twenty-four hours.

Twelve grains of arsenic acid, mixed up with some fat, were administered to a spaniel bitch, together with the antidote: the animal died in thirty-eight hours. Some fragments of the poison were found in the animal's stomach.

61. *Detection of Arsenic when mixed with Organic Substances.* By M. TAUF-
FLIER.—The operations of legal chemistry are often directed to the detection of arsenic in organic substances; for instance, in the matters found in the digestive canal of persons supposed to have been poisoned. In this case it is essential, before having recourse to reagents, to destroy the organic substances mixed with the supposed poison. The various plans hitherto devised for this purpose, have been, to decompose these organic matters by fire, by acids, or by alkalis. These modes have given satisfactory results, but they present many difficulties.

I have succeeded in getting rid of these substances, by a simple method, which enables the operator to detect very small proportions of arsenious acid. The mucilaginous fluids, arising from a decoction of the contents of the stomach, are to be treated by a solution of oxide of zinc in potash; this oxide com-

biner with the organic matters, and forms an insoluble compound, which rapidly precipitates. The supernatant fluid is clear and limpid, and may be filtered or decanted; it contains arsenite of potash and an excess of oxide of zinc dissolved in potash. This liquid being acidified with hydro-chloric acid, hydrosulphuric acid is to be added, when a yellow colour will be developed; if there is the least trace of arsenious acid present. The zinc remains in solution. By boiling, the sulphuret of arsenic collects in yellow flakes, which having been collected and washed, are to be heated by the means proper to reduce it to a metallic state. By this method one-tenth of a grain of arsenious acid may be detected in half a pound of alimentary matters.*

To reduce the sulphuret of arsenic, I make use of a very simple process, which will give evidence of arsenic in the most minute portion of the sulphuret. This consists of introducing the sulphuret into a glass tube of three inches in length, and closed at one of its extremities, and placing directly above the sulphuret a piece of leaf silver rolled into a ball. The closed extremity of the tube is to be heated by means of a spirit lamp. A decomposition immediately takes place, the sulphuret is volatilized and decomposed, the sulphur entering into combination with the silver, whilst the arsenic condenses in a metallic state in the form of a brilliant blackish gray ring, a little above the heated portion of the tube.

If, instead of reducing the sulphuret to a metallic state, it is wished to transform it into arsenious acid, instead of the leaf silver, the oxide of that metal is to be used. The decomposition takes place very rapidly at a somewhat elevated temperature, the arsenious acid which is produced condenses towards the upper part of the tube, in small, white, octahedral crystals, which may be readily detached. If the acid be in so small a quantity that it would be impossible to detach it, by reversing the tube, the sulphuret of silver, which has melted into a small solid mass, will fall out. Distilled water is then to be poured into the tube, and on the application of heat, the arsenious acid will be dissolved, when the solution can be tested by the proper reagents.—*American Journ. of Pharm. and Journ. de Pharm.*

MEDICAL STATISTICS.

62. *On the Probable Duration of Life Among Medical Practitioners.* By Professor CASPER, of Berlin. There is no part of medical statistics more painfully interesting, and at the same time important, than that which relates to the probabilities of the duration of life. Inquiry on the subject, it is true, scarcely tends to lift the thick veil which conceals the limits of individual life, and has little power to satisfy the pardonable curiosity which we all have, to know how long we may have to live: yet, when applied to masses, it enables us to arrive at results of great consequence, whenever provision is to be made for the duration of life in general, or for the probable duration of it at certain epochs.

For upwards of ten years I have been engaged, during my leisure moments, in researches of this kind—the difficulties of which can only be compensated by the value attaching to each result. I have considered most of the circumstances which tend to modify the duration of human life, and those more particularly which are connected with the practice of the different professions. Much has been attempted within the last two hundred years on this subject by mathematical and statistical inquirers, yet much remains to be done; for, in fact, with the exception of Deparcieux's work on the mean duration of life among monastic persons of both sexes, we cannot be satisfied with any thing that has hitherto been accomplished.

* The operation also succeeds by using a solution of sulphate of zinc, and then adding potash or sub-carbonate of soda in excess, instead of making use of the solution of oxide of zinc.